

Completing the NuGO Nutrigenomics course

Freelance dietitian Mariette Abrahams has recently completed the Nutrigenomics course with the European Nutrigenomics Organisation (NuGO), and talks about the benefits of studying this growing topic area.



I have always been fascinated by the effects of genetics and ancestry on how we behave and evolve. One event clearly stands out in my mind when my nephew was very ill and the medical team could not find a diagnosis. After a few days, the doctor asked us if we had any family members with porphyria. "Porphyria?" I asked, "isn't that what Henry the VIII had?" We had no idea because we don't know our ancestral history.

Since becoming a dietitian, I have noted that the effects of environment and dietary habits have become even more evident as patients react to foods and diets differently. Before this new and exciting area was really coined 'nutrigenomics', I was already reading books and articles on the effects of genetics on dietary intake.

The dietetic uptake of nutrigenomics has been slow over the years, but interest is starting to grow as scientific evidence is mounting. Dietitians in South Africa are already implementing nutrigenomics as part of their clinical offering. In the US, dietitians such as Ruth deBusk and Colleen Fogarty Draper have been encouraging fellow dietitians to get updated and informed on nutrigenomics

for a few years now. The American Dietetic Association has made nutrigenomics one of its key strategic priorities due to the association's strong belief that nutrigenomics will be the way of the future. Even though clinicians do not enjoy their clients and patients coming in with internet searches on the latest food facts, the reality is that soon enough patients will be coming in with their genetic reports for us to interpret because the market for genetic testing is growing at around 20% annually. Large food companies are also investing vast amounts in the area of nutrigenomics with the aim of developing functional foods for subtypes of populations with specific needs.

There is now a certified course on nutrigenomics offered by the European Nutrigenomics Organisation (NuGO) based at Wageningen University in the Netherlands. Four modules are offered, however if you are not a researcher, the first two modules on 'Polymorphisms and responsiveness to diet' and 'Molecular nutrition and genomics' are the most applicable.

The course is designed for clinicians and researchers and you really do need to have a basic working knowledge of nutrition

in order to learn effectively, so being a dietitian is a great asset. Online application is quick and easy and the cost is around £500 per module although you can apply for a reduced fee. All of the modules are completed online. The first module on polymorphisms touches on the impact of the environment and the effect of dietary choices on our gene expression. The two main topics covered include obesity and diabetes. You will learn which genetic variations (single nucleotide polymorphisms or SNP's) have been linked to the development of these chronic diseases and how ethnicity impacts on the phenotype. The module ends with a test and an exam, which is not too harsh.

The second module on 'Molecular nutrition and genomics' is a very interesting module on how and when genes are expressed, and it does bring nutrigenomics to life. In this module you take on the role of a research student and design and test your hypothesis by taking part in an experiment with virtual mice; you observe what happens to the genes through analyzing the microarray results. You also learn how genetic testing is conducted, what factors can influence the results, how to interpret the results and also

which databases to use for further information on specific genes.

Whilst patients may only want to know what SNPs they have inherited and how to adjust their diet and lifestyle accordingly, this course has equipped me with the knowledge to look at articles critically and understand what the respective genes do. Each module took me about one month to complete although you do get three months per module. The course team is very helpful and reply to any queries swiftly. On completion of each module you receive a certificate approximately two months later.

In my opinion, this accredited course is a great and indispensable investment for anyone wishing to progress with their CPD and to stay ahead of the future trends in nutrition and dietetics. **dt**

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For more information on the course, contact NuGO on www.nugo.org

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